

REMARKS

Claims 1-38 were pending in this application.

Claims 1, 10, 15, 24, 29, and 34-38 have been rejected.

Claims 2-9, 11-14, 16-23, 25-28, and 30-33 have been objected to.

Claim 15 has been amended as shown above.

Claims 1-38 remain pending in this application.

Reconsideration and full allowance of Claims 1-38 are respectfully requested.

I. ALLOWABLE CLAIMS

The Applicant thanks the Examiner for the indication that Claims 2-9, 11-14, 16-23, 25-28, and 30-33 would be allowable if rewritten in independent form to incorporate the elements of their respective base claims and any intervening claims. Because the Applicant believes that the remaining claims in this application are allowable, the Applicant has not rewritten Claims 2-9, 11-14, 16-23, 25-28, and 30-33 in independent form.

II. REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 1, 10, 15, 24, 29, and 34-38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,339,050 to Llewellyn ("*Llewellyn*") in view of U.S. Patent No. 5,420,545 to Davis et al. ("*Davis*"), U.S. Patent No. 5,939,949 to Olgaard et al. ("*Olgaard*"), and U.S. Patent No. 5,142,247 to Lada, Jr. et al. ("*Lada*"). This rejection is respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (*MPEP* § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)). Only when a *prima facie* case of obviousness is established does the burden shift to the applicant to produce evidence of nonobviousness. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993)). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. (*In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985)).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to

make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. (*MPEP* § 2142).

Claims 1, 15, 29, 37, and 38 recite that a "charge pump current" is adjusted based on at least one of: "one of a first plurality of ranges" in which a "first divider value lies" and "one of a second plurality of ranges" in which a "second divider value lies."

A feedback divider 206 in *Llewellyn* has a "division factor" of M, and M has an "operational range" of "256:1." (*Col. 2, Lines 47-65*). The Office Action asserts that *Llewellyn* inherently discloses that a charge pump current is based on a range in which M lies and that there are multiple ranges. (*Office Action, Page 3, Fourth paragraph*). The Office Action bases these inherency arguments on the assertion that *Llewellyn* must alter the ranges during "coarse" and "fine" tuning of a phase lock loop. (*Office Action, Page 3, Fourth paragraph*).

The burden is on the Patent Office to establish that *Llewellyn* inherently uses multiple "ranges" of values for M and that *Llewellyn* inherently bases the charge pump current on which range the value of M lies within. The Office Action fails to make both showings.

Llewellyn specifically recites that the charge pump current is based on the exact values of M and/or N (the division factor of a feedforward divider 202). For example, *Llewellyn* expressly recites that a charge pump current (denoted I'_{pump}) may be determined using a formula of $M \times K_1$ (where M is the division factor of the feedback divider 206 and K_1 is a constant) or a formula of $N \times K_2$ (where N is the division factor of the feedforward divider 202 and K_2 is a constant). (*Col. 4, Lines 15-24; Col. 5, Lines 32-40*). The charge pump current could also be based on the actual values of both N and M. (*Col. 5, Lines 23-31*).

Llewellyn is crystal clear here – the value of the charge pump current is based on the actual value of M and/or the actual value of N. The charge pump current in *Llewellyn* is not based on which of a plurality of “ranges” N or M lies within.

The Office Action’s assertions of inherency are contradicted by the express recitations in *Llewellyn*. As a result, the Office Action’s assertions of inherency cannot be maintained.

Beyond that, the Office Action’s arguments regarding inherency are based entirely on the assertion that *Llewellyn* uses different ranges for the value of M during “coarse” and “fine” tuning. However, *Llewellyn* contains absolutely no mention that the “operational range” of M would vary during “coarse” or “fine” tuning. In fact, *Llewellyn* contains absolutely no mention that the “operational range” of M would vary at any time. The Office Action fails to cite any portion of *Llewellyn* to support its assertion that *Llewellyn* varies the range of M during “coarse” and “fine” tuning of a phase lock loop.

Moreover, it does not matter if the “operational range” of M varies depending on whether “coarse” or “fine” tuning is being performed. In either case, the value of the charge pump current is still based on the actual value of M. The value of the charge pump current in *Llewellyn* is never based on the “range” in which the value of M lies.

For these reasons, the Office Action fails to show that *Llewellyn* discloses, teaches, or suggests adjusting the value of a charge pump current based at least partially on “one of a first plurality of ranges in which [a] first divider value lies” and/or “one of a second plurality of ranges in which [a] second divider value lies” as recited in Claims 1, 15, 29, 37, and 38. None of the other references is cited as disclosing, teaching, or suggesting these elements of Claims 1, 15,

29, 37, and 38. As a result, the Office Action fails to establish a *prima facie* case of obviousness against Claims 1, 15, 29, 37, and 38 (and their dependent claims).

Accordingly, the Applicant respectfully requests withdrawal of the § 103 rejection and full allowance of Claims 1, 10, 15, 24, 29, and 34-38.

III. CONCLUSION

As a result of the foregoing, the Applicant asserts that the remaining claims in the application are in condition for allowance and respectfully requests an early allowance of such claims.

SUMMARY


If any issues arise, or if the Examiner has any suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.

The Commissioner is hereby authorized to charge any additional fees connected with this communication (including any extension of time fees) or credit any overpayment to Davis Munck, P.C. Deposit Account No. 50-0208.

Respectfully submitted,

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